

Editorial

A Special Issue of *CIT* based on the best papers at the 2010 annual conference *International Conference on Information Technology Interfaces (ITI)*

1. Opening Statements

This is the regular edition of CIT devoted to the annual conference on Information Technology Interfaces (ITI) for 2010. The Guest Editors and their roles for this Special Issue are:

- Ray J. Paul who Guest Edited last year's Special Issue for CIT on ITI (Paul, 2010). In Paul's editorial for last year's Special Issue, he wrote a section entitled *How to write a paper that will be accepted (most likely)*. In this Special Issue the three Guest Editors, having selected 16 best papers, decided to invite the authors of these papers to rewrite them using this advice on paper writing. In this editorial we shall comment on the process and these revisions.
- Dunja Mladenec and Marko Tadic were also the organizers of ITI's special theme at the 2010 conference, the theme being *Language Technologies: An Infrastructure for Information Society*. The best papers from the Special Session are described later in this editorial.

ITI 2010 received 150 papers and poster abstracts, of which 110 made it to the conference proceedings. The Special Session contained 12 of these papers, of which 7 were selected as 'conference best papers', and 6 of those revised their papers as requested by the guest editors, and appear in this Special Issue. Of the remaining nearly 100 conference papers, 9 were selected as being 'conference best papers', and all 9 revised their papers and are in this Special Issue.

This editorial offers its content in the following sequence: First we have a review of the conference Special Session on *Language Technologies: An Infrastructure for Information Society*, written by Mladenec; then a reminder of Paul's 2010 Special Issue advice on *How to write a paper that will be accepted (most likely)*; the following section discusses the Challenge put to the best paper authors based on Paul's list of questions, followed by the outcomes of our authors applying this advice; and finally we make some conclusions/observations.

2. ITI 2010 Special Session on Language Technologies: An Infrastructure for Information Society

Language Technologies address problems related to natural language and speech. This can be seen as providing infrastructure to information society in general, as well as providing valuable underlying technology for a number of research areas including information retrieval, text mining, machine translation, knowledge representation, speech recognition and synthesis. Language technologies use methods from other areas including machine learning, statistics, and signal processing.

By their nature, language technologies are applied to a selected natural language or a set of languages and have to be adjusted as needed to consider specifics of the language. While the methods

may be general, their adjustment for a particular language and development of the necessary language resources is recognized as being of national interest, especially for languages of smaller nations. A basic language technology infrastructure has already been developed for major European languages, but the availability of more sophisticated technologies vary for other European and non-European languages. This discrepancy in the usage of language technologies in society, as well as in other research areas, currently opens a number of challenges.

The papers on language technologies included in this issue address a whole range of problems including development of language resources and techniques to cover infrastructural needs, as well as applications using different language resources.

Infrastructural issues are addressed in the following three papers: the paper on *Syntactic Patterns in Croatian WordNet*, where detection of patterns was performed in order to create unambiguous and consistent synset definitions in the future development of the Croatian Wordnet; the paper on *Croatian Language Resources for NooJ* presents a Croatian module for NooJ development environment for constructing large-coverage formalized descriptions of natural languages and apply them to large corpora in real time. The paper on *Statistical Machine Translation of Croatian Weather Forecasts: How Much Data Do We Need?* presents the first step towards developing a system for translating Croatian weather forecasts into multiple languages.

Research issues related to applications using language technologies are addressed in the following three papers: *A Croatian Weather Domain Spoken Dialog System Prototype* proposing an approach to domain-oriented spoken dialog system for the Croatian language. *Adaptation of NLP Techniques to Cultural Heritage Research and Documentation* presenting tools for semantic annotation using controlled vocabularies and formal ontologies. *Contextualized Question Answering* proposes an easy-to-use system for contextualized question answering, where contextualization is achieved by using an ontology and the answers are provided based on a domain specific document collection.

Many of these papers were considerably improved when revised by the authors as requested, and so for the reader seeking a good introduction to the topic, we can but recommend the reading of these papers.

3. How to Write a Paper that will Be Accepted (most likely)

So here is the latest version of Paul's "How do you write a quality paper?"

As I have mentioned before in the *European Journal of Information Systems* (Paul, 2009), you could do worse than making sure your paper would provide 'obvious' answers to the four questions below. In fact, very few published papers meet all four questions obviously. But they would be better papers if they did.

Assuming the paper is an appropriate paper for the journal being submitted to, then:

1. What story are you trying to tell the reader?

One story, note, not many. There may be two or three major points to the story, but much more than that confuses readers. A story written for the reader can be understood in 10 years time by the author if they need to revisit the paper. A story written for the writer (the majority published) will leave the authors as perplexed in 10 years time as readers are now.

2. What will the reader know after reading your story that they did not know before reading the story?

The whole point of the paper one presumes.

3. Why should anyone believe you?

This is the downfall of many papers, but if not believable, then that is the end of the paper.

4. Why should anyone care about the story being told?

What value will the reader attach to the point of the story? If none, you will find that reviewers tend to disguise this problem under the rubric 'significance of the contribution'.

5. What is the essence of your paper in one sentence?

I know I said four questions, but the fifth question has nothing to do with whether your paper is published or not. Answering this question readily enables readers to attach the idea to you, the author, and hence is likely to push your citation index up and enhance your reputation.

6. What motivated your research and the paper you have written?

Again, I know I said four questions, but the sixth question may have nothing to do with whether your paper is published or not. Putting this information in your paper is likely to make the paper more interesting, and therefore it might be more widely read.

4. The Challenge Posed to the Author of the Best Papers

The intentions of the Editors of this Special Issue are set out in the following invitation letter sent out to the authors of the selected papers.

Invitation to Authors

Dear

We are the co-editors of this year's Journal of Computing and Information Technology special issue covering the annual Information Technology Interfaces conference. We have selected your paper XXX YYY ZZZ as one of the best papers at the conference and would like to publish a modified version of your paper in this Special Issue. The modifications we have in mind are designed to enable us, the editors, to come to some conclusions about how to write quality papers. What we have in mind is the following:

In last year's ITI special conference issue of the Journal of Computing and Information Technology, Paul (2010) gave some advice on how to write good papers. A copy of this advice is attached, in case you have mislaid this issue of the journal. We would like you to:

1. Rewrite your paper where necessary so that the advice given is accounted for as much as possible.
2. Give us a list of the changes made.
3. Give us a summary of your views about the changes made to your paper.

We will not use the information in 2 and 3 directly, but will summarize the outcomes for the papers in the Special issue.

You may be curious as to why, having selected your paper as one of the best, we are asking you to improve it. We hope to show that the improvements made to the best papers are worthwhile, and so show that the advice has wide applicability. Of course, we may discover something else!

Please let us know within one week whether you are willing to go ahead with modifications to your paper. If so, please complete the changes, the list of changes, and your views by 'aa;bb;cccc'. Thank you in anticipation.

Immediate Reactions

We selected 16 papers to be invited to participate in this Special Issue, fully expecting 3 to 5 papers to drop out. In fact, first all the papers responded positively, and then in the end, only one did not submit for the Special Issue. There were a few queries, totaling about half a dozen across the submissions, and these were relatively easy to deal with. All the revised papers were improvements on the original papers, although sometimes only a small improvement.

5. Analysis of the Challenge Outcomes

Out of the 15 papers published in this Special Issue, 13 were significant rewrites of the original paper. The other 2 papers made small changes to the original text and either did not understand the challenge or ignored it. But they had been selected anyway as good enough to be published in the Special Issue and so they are included.

All of the 13 papers that took the challenge made changes to the introductory and closing sections of the paper and the abstract. These changes reflected the reaction to questions 1, 2, 4 and 6 from Paul's list. Most of the papers therefore have an improved story to tell, a clear motivation for being written, and sometimes a one sentence description that will enable easy citation by other authors. The search for an improved story line was so intense, that 4 of the 13 papers even had the title of the paper changed to better reflect this clear story line.

All of the 13 papers acknowledged the benefits to their original paper of accepting the challenge, although the intensity of the claims varied. Here are some examples:

- We found the process of considering each of the six questions very enlightening and useful in evaluating exactly what message we were trying to convey and, as importantly, how. In many papers these days, we are encouraged to write structured abstracts as a means of providing the reader with a more insightful view of the paper and we see our approach of using Ray's questions as an extension to this.
- The changes made to the paper give us new perspectives, such as potential usefulness of our work for other researchers.
- I'm also humbled by how much of the previous version needed clarifying/grammar fixing to make as much sense as I thought it did the first time around.

Some papers made the observation that the authors would use Paul's list when writing their papers in the future:

- In future papers, it will be difficult to ignore these six questions – and when I write technical papers in the future, I am sure I will give serious thought to a similar approach.
- We think that for the next paper we shall keep the list of questions in mind and design the paper from the beginning in such a way as to answer them.

There was one divergence in the responses which is probably worth quoting and which is from Robert Manger. The Editors agree that the original paper was excellent, at least one of the top 3 papers at the Conference.

Summary of My Views about the Changes Made to the ITI 2010 Paper

“Measuring True Performance of the Work Function Algorithm for Solving the On-line k-Server Problem“

First of all, I believe that the paper in its original form (as published in the ITI 2010 Proceedings) was already quite in accordance with the advice given by Ray J. Paul in CIT Volume 18, No 2, 2010 (further on cited as Paul, 2010). This is probably the reason why the paper has been selected as one of the best papers at ITI 2010. For the same reason, I was very careful in introducing new changes, in order not to spoil what is already good enough.

Next, I also believe that after revision the paper has become even more compliant to the advice from (Paul, 2010). Indeed, the text now provides “obvious answers” to six questions listed in (Paul, 2010). Now I will go through the list of questions and point out where each of the answers can be found.

- **Question 1:** *What story are you trying to tell the reader?*
The answer is given in Section 1 where the aim of the paper is defined. After Change 1, it has become clear that there is in fact only one aim, and that the other aim is only an implicit and secondary consequence of the first aim. Thus the paper really tells only one story.
- **Question 2:** *What will the reader know after reading your story that he or she did not know before reading the story?*
The answer is given in the Section 5 of the paper. Thanks to Change 3 and Change 4, the answer is now very clear and straightforward.
- **Question 3:** *Why should anyone believe you?*
Most people would believe me, because in Section 4 I have presented convincing experimental results that support my conclusions. Of course, some people may doubt that the presented data are fake or incomplete or manipulated in some way. For such distrustful and sceptical readers I have introduced Change 2. Now they can download our computer programs and check the results by themselves!
- **Question 4:** *Why should anyone care about the story being told?*
This is the toughest question, but I think that the paper still provides an implicit answer. Of course, most people on this planet do not care at all. But it is quite obvious that the paper does not address ordinary people, but only a very small group of specialists that have studied the same problem and the same algorithm. Such small group would care, because the paper observes the issues they are familiar with from another perspective, gives some new information, and points to some new

research directions, as underlined by Change 3 and Change 4 in Section 5. In other words, such readers would care, because the paper could inspire them for writing more papers themselves. And everybody working in academia cares about writing papers thanks to the well known “publish or perish” principle.

- **Question 5:** *What is the essence of your paper in one sentence?*
The essence in one sentence has been introduced by Change 3 in Section 5. Thus it says that the true performance of the work function algorithm is quite different from what is suggested by theory.
- **Question 6:** *What motivated your research and the paper you have written?*
This question has been answered by the third paragraph of Section 1. Thus the paper was motivated by the fact that, thanks to our previous paper, we had a technical possibility to answer some additional questions with a minimal additional effort.

To summarize, by using the advice from (Paul, 2010), it has really been possible to slightly improve the paper. Improvement would be more dramatic if the original version of the paper were worse than it actually was.

The reader may think there is a contradiction in making all the improvements listed above and the claim that the paper was only slightly improved. The Editors advise such readers to go and look at the paper and see for themselves. To whet the appetite, the abstract of the new paper is reproduced below. It is a rare example of just what an abstract should be – short, sharp and informative enough for anyone in the world to know, after reading it, whether this is a paper they want to read more about. All PhD students should be exposed to this abstract in order to guide them in writing their dissertation abstracts.

Abstract. *This paper deals with the work function algorithm (WFA) for solving the on-line k-server problem. The paper is concerned with assessing actual performance of the WFA in terms of its serving costs. First, an efficient implementation of the WFA is briefly described. Next, some experiments are presented, where the performance of the implemented WFA has been measured on very large problem instances. Thereby, the problem instances have been selected from some frequently studied classes where sharp theoretical estimates of performance are available. Finally, the measured performance of the WFA is compared with the corresponding theoretical estimates and with some other algorithms.*

6. Conclusions to the Challenge

The Editors thank the authors for participating in this Special Issue under the conditions set by the Challenge. The Challenge was not carried out in strict trial conditions, so conclusions would be difficult, if not impossible to justify. It can reasonably be said that most authors claimed that the rewriting of their papers was beneficial, but they would say that, wouldn't they?

However, if all authors found it as natural as Robert Manger does to write papers that match Paul's list, the readability and usefulness of our journals would rise appreciably.

Editors

Dunja Mladenec

Ray J. Paul

Marko Tadic

References

- [1] R. J. PAUL, What is published in our journals cannot change unless we do. *European Journal of Information Systems*, 18, pp. 189–191, 2009.
- [2] R. J. PAUL, Editorial. *Journal of Computing and Information Technology* 18(2), pp. i–iv, 2010.

